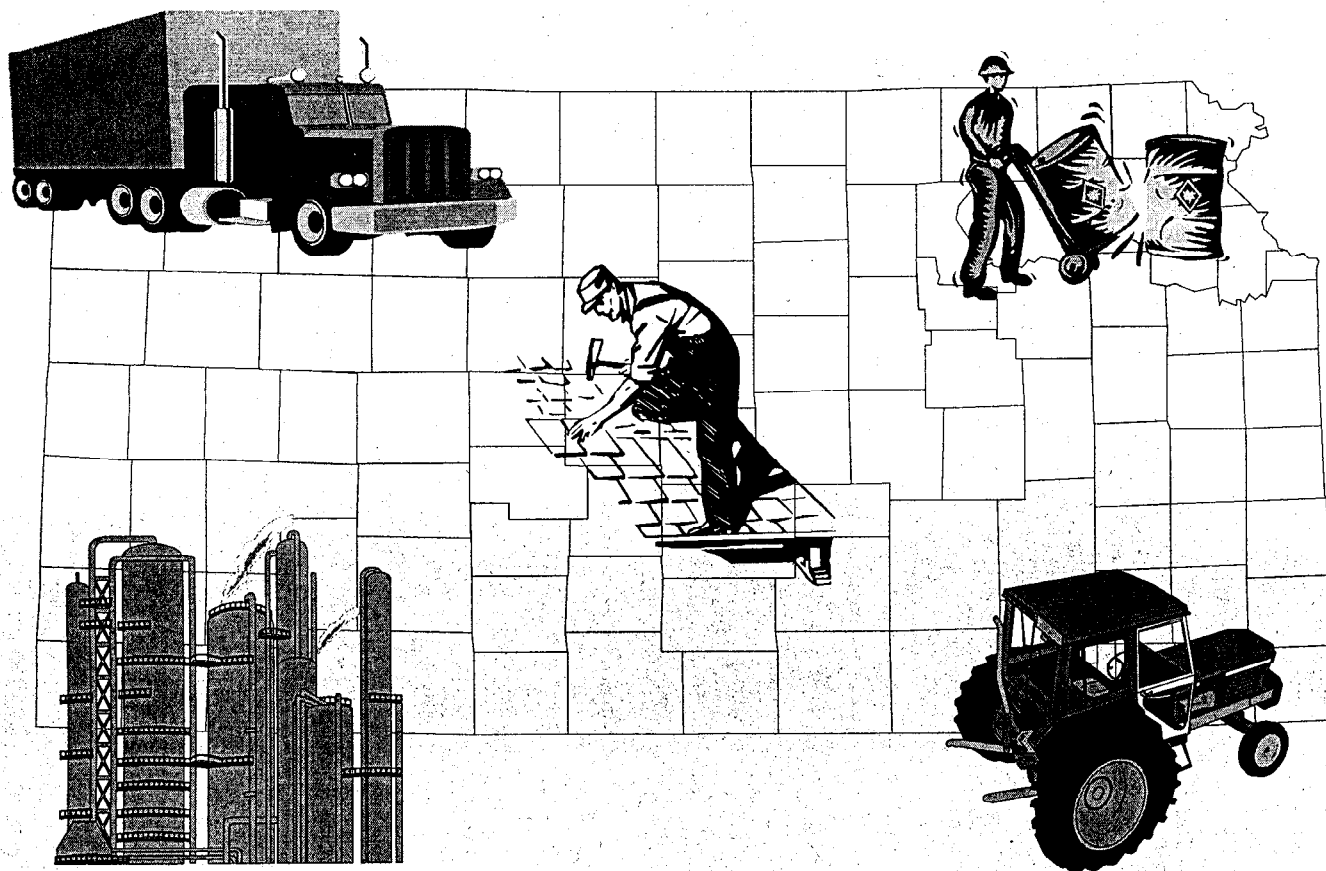


FATAL OCCUPATIONAL INJURIES KANSAS, 1998



Kansas Department of Health and Environment
Landon State Office Building, 900 SW Jackson, Topeka, KS 66612
www.kdhe.state.ks.us/ches

FATAL OCCUPATIONAL INJURIES KANSAS, 1998

Bill Graves, Governor

Clyde D. Graeber, Secretary
Kansas Department of Health and Environment



Prepared by
Kansas Department of Health and Environment
Center for Health and Environmental Statistics
Office of Health Care Information

In cooperation with
the U.S. Department of Labor Bureau of Labor Statistics

Kansas Department of Human Resources
Division of Worker's Compensation

and

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December, 1998

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INTRODUCTION

Fatality information appearing in this report was collected through the Census of Fatal Occupational Injuries (CFOI) program, a cooperative agreement between the U.S. Department of Labor, Bureau of Labor Statistics (BLS) and the Kansas Department of Health and Environment, Center for Health and Environment, Office of Health Care Information. The CFOI program was developed by BLS to provide a comprehensive, accurate, descriptive and accessible census of work related fatalities. The program was piloted for the nation in 1988 and Kansas joined the program in 1991. The information presented in this publication covers injury fatalities that occurred in Kansas in 1998.

Under the CFOI program, the incident leading to the death, but not necessarily the death itself, must have occurred in that state. For example, if a worker injured in a work-related incident in Kansas were to die in another state, the case would still be in scope for Kansas. On the other hand, a worker who dies in Kansas from an injury suffered in another state would not be included in the statistics for Kansas but rather in the state in which the injury occurred.

Although CFOI was developed to obtain an accurate count of fatal injuries, the program also collects information on occupational illnesses. Because of the latency period of many occupational illnesses, it is difficult to compile an accurate count using CFOI methodology. Also, as fatal illnesses tend to be disputed as to work-relationship, a census is not attainable within the time frame set forth in the CFOI program.

Information illustrated by the CFOI program are useful in:

- tracking trends of workplace hazards
- targeting high hazard work conditions and practices
- establishing priorities for safety inspections and follow-up visits
- identifying standards requiring stricter enforcement
- finding areas where new standards may be needed

Economists, statisticians, epidemiologists, safety specialists, business and government executives, news media and program managers, as well as many other groups and individuals have found this publication to be quite useful.

One of the criterion for publication requires that three or more incidents of a fatality must have occurred in a specific category before they may be published in a table. If numbers are omitted, and noted as such, it is because they did not meet publication requirements.

Copies of this report, as well as additional information, may be obtained by contacting the Kansas Department of Health and Environment at the address, phone, or fax number listed below. This report is also available in an electronic form from KDHE or by accessing the KDHE home page at "<http://www.ink.org/public/kdhe>".

If you desire a copy of this publication in an alternative form because of a disability, contact our office at the address listed below:

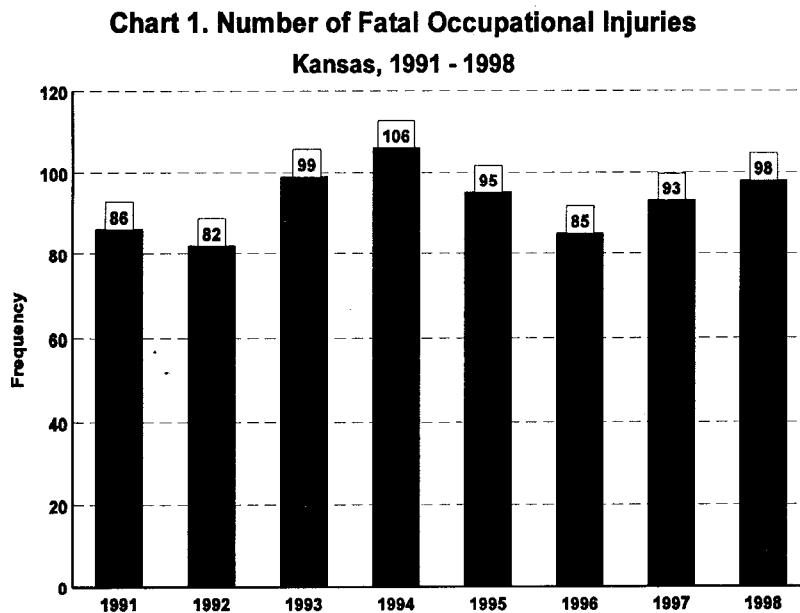
Kansas Department of Health and Environment
Health Care Information
Occupational Injury Surveillance Section
Landon State Office Building
900 SW Jackson Suite 1002 North
Topeka, KS 66612-1290
Phone: 785-296-1058 Fax: 785-291-3612

SECTION ONE

CHARTS

HIGHLIGHTS, 1991- 1998

There were 98 fatal occupational injuries occurring in Kansas in 1998. Looking at historical data, the 1998 figure was the third highest total in the state since the CFOI program began in Kansas in 1991. An unusually high number of fatal occupational injuries in the retail industry (15) contributed to the high total in 1994, while the agriculture, forestry, and fishing industry (36) accounted for the high number in 1993. In 1998 an unusually elevated number of fatalities was seen in the services industry (12), significantly increasing the overall total. (Chart 1, Chart 2, Table 2, Table 3)



The agriculture, forestry and fishing industry has experienced an increase in the number of fatalities every year for the last four years. In 1995, this industry saw 17 work related deaths; in 1996, 18; 1997, 22; and in 1998 there was yet another increase to 23. (Chart 2, Table 2, Table 3)

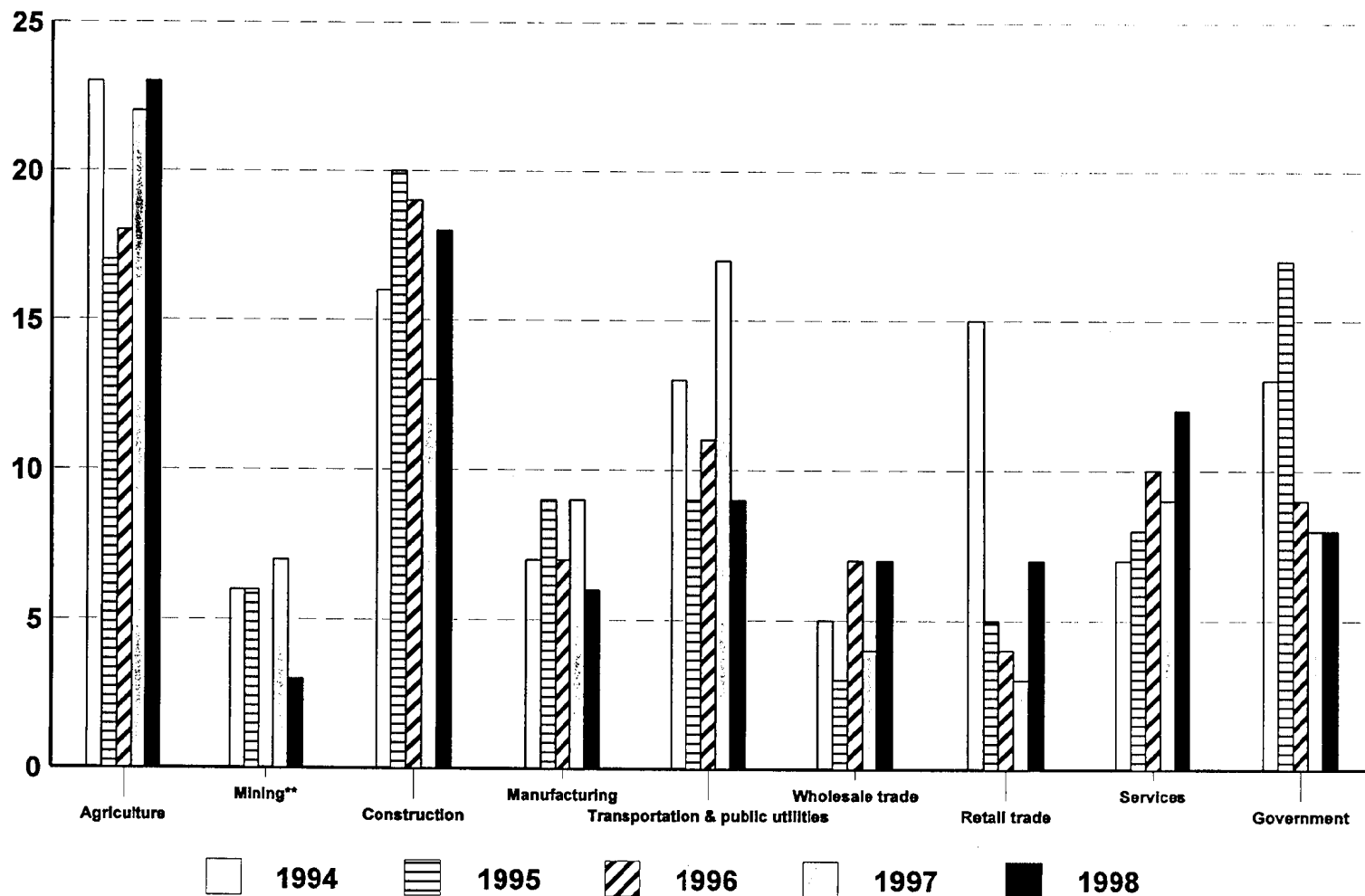
In 1998, the mining industry suffered only 3 occupational fatalities, declining from the year before where this industry incurred 7 work related deaths. (Chart 2, Table 2, Table 3)

Wholesale trade industries had 7 occupational fatalities in 1998 which equaled the previous high recorded for this industry in the state during 1996. Five of the 7 occurred in the farm-product raw materials division of this industry. (Chart 2, Table 2, Table 3)

Transportation and public utilities industry experienced a decline in number from this industry's all time high of 17 fatal occupational injuries in 1997. In fact, 1998 tied with 1995 for an all time low of only 9 work related fatalities. (Chart 2, Table 2, Table 3)

Retail trade work related fatalities increased to 7 in 1998, breaking a 3 year decline in this industry. Four of the 7 fatalities occurred in eating and drinking establishments. (Chart 2, Table 2, Table 3)

**Chart 2. Number of Fatal Occupational Injuries
By Industry*, Kansas 1994 - 1998**



* Finance, insurance, and real estate did incur 3 deaths in 1998 but are not represented because less than three deaths occurred yearly from 1994-1997.

** Mining is not represented in 1996 because less than 3 deaths occurred that year.

DEMOGRAPHIC HIGHLIGHTS

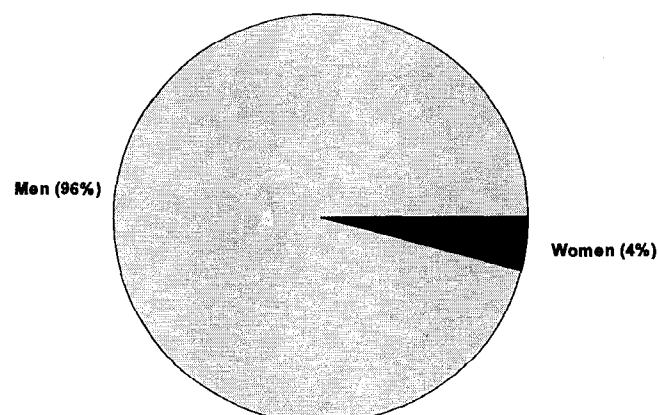
Of the 98 workers who lost their lives due to occupational injuries in 1998, 73, or 74%, were wage and salary workers. The remaining 25, or 26%, were self-employed. (Chart 3, Table 1)

Chart 3. Fatal Occupational Injuries by Employee Status
Kansas, 1998



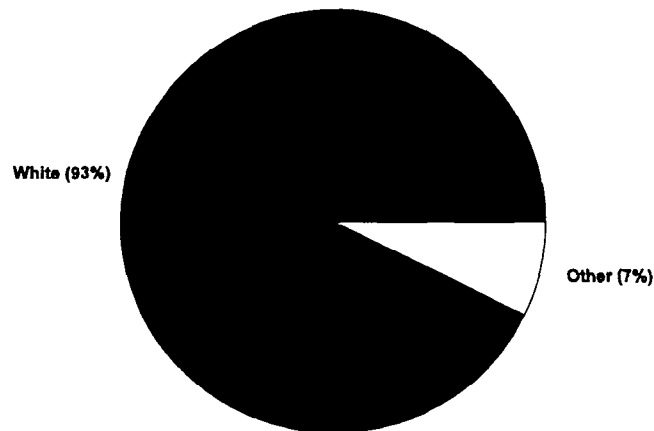
Occupational fatalities occurred much more often to men than to women in Kansas in 1998. The 94 men accounted for 96% of all fatalities in Kansas compared to the 4 women, which accounted for the remaining 4%. (Chart 4, Table 1)

Chart 4. Fatal Occupational Injuries by Sex
Kansas, 1998



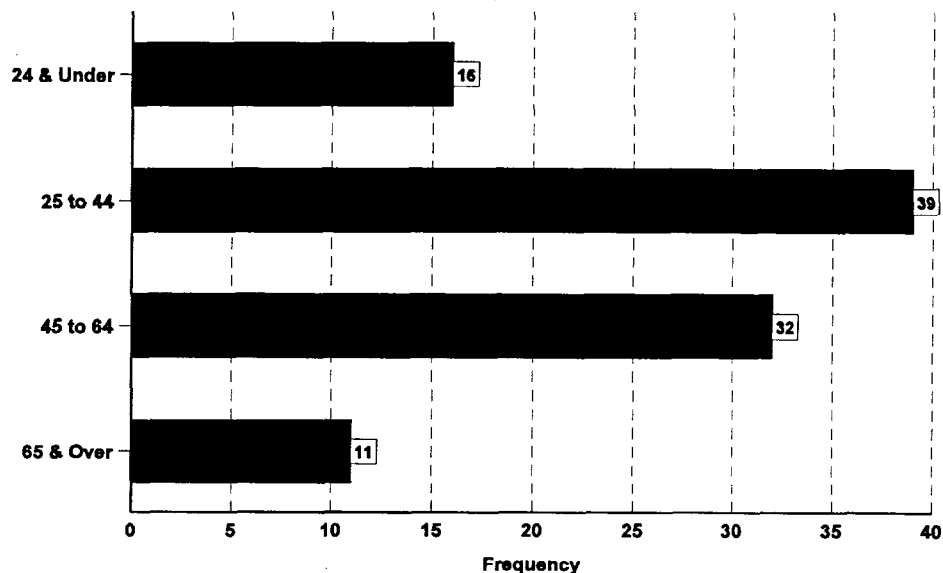
Of the 98 occupational fatalities, 91, or 93% were white. Fifteen workers were of Hispanic origin, but may have been of any race. (Chart 5, Table 1)

Chart 5. Fatal Occupational Injuries by Race
Kansas, 1998



The greatest number of fatal occupational injuries (39) occurred in the 25 to 44 age-group, accounting for 39% of all work related fatalities in 1998. Second, was the 45 to 64 age-group with 32 fatalities. Ranking third was the 24 and under age-group with 16 deaths. Last, the 65 and over age-group had the least with only 11 fatal work related injuries. (Chart 6, Table 1)

Chart 6. Fatal Occupational Injuries by Age-Group
Kansas, 1998

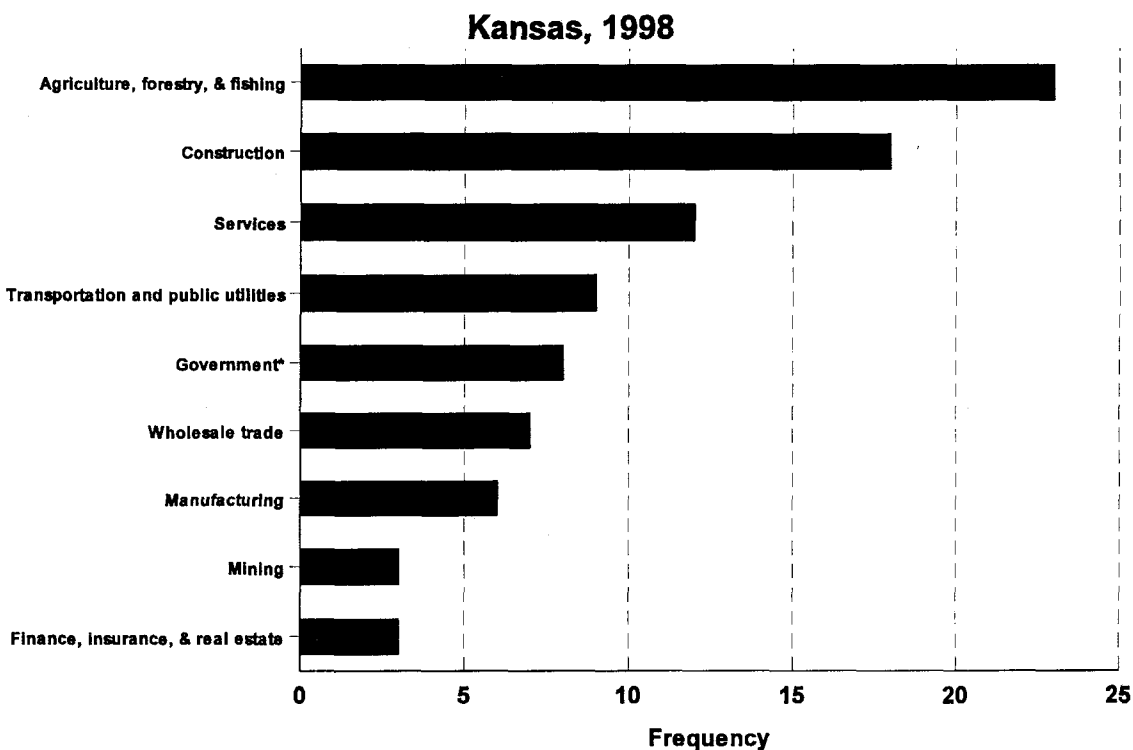


INDUSTRY

Agriculture, forestry, and fishing proved once again to be the most hazardous industry in Kansas, with 23 work related fatalities in 1998. Nineteen of those 23 deaths occurred on general farms that were primarily crop. (Chart 2, Chart 7, Table 2, Table 3)

The construction industry ranked second, incurring 18 occupational deaths in 1998. Special trades contractors as an industry group experienced 11 of the 18 work related deaths. Roofing, siding and sheet metalwork claimed 3 of those 11 while the other 8 were spread evenly throughout the field. Six of the 18 were in heavy construction, and 4 of the 6 were in the water, sewer, and utility line of work. (Chart 2, Chart 7, Table 2, Table 3)

Chart 7. Fatal Occupational Injuries by Industry



*Includes fatalities to workers employed by governmental organizations regardless of industry.

The services industry accounted for 12 of the 98 deaths in 1998, which surpasses the previous high of 10 recorded in 1995. Business services experienced 5 deaths while help supply services claimed 4 of the 12 occupational fatalities. (Chart 2, Chart 7, Table 2, Table 3)

There were only 9 work related deaths in the transportation and public utilities industry in 1998. This equaled the 1995 total which was the previous low for the industry in the state. Six of the 9 were in trucking and warehousing, 4 of those 6 occupational deaths occurred in the local trucking without storage category. (Chart 2, Chart 7, Table 2, Table 3)

With a high in 1995 of 17, and a low of 6 in 1991, government employees fared the same as they did in 1997 with 8 work related fatalities in 1998. Local government employed 7 of the 8, with the Federal government employing the last person. (Chart 2, Chart 7, Table 2, Table 3)

For the first time the finance, insurance, and real estate industry experienced enough work fatalities to actually be recorded and displayed in this publication. In 1998, this industry accounted for 3 of the 98 fatal work related injuries. (Chart 7, Table 2, Table 3)

Both the wholesale trade and the retail trade industries sustained 7 fatal occupational injuries in 1998. Five of the 7 in the wholesale trade industry were in the farm-product raw materials field and 4 of the 7 occupational fatalities in the retail trade industry occurred at eating and drinking establishments. (Chart 2, Chart 7, Table 2, Table 3)

Mining went from 7 in 1997 to only 3 in 1998 in Kansas. All 3 work fatalities were experienced in the oil and gas field services. (Chart 2, Chart 7, Table 2, Table 3)

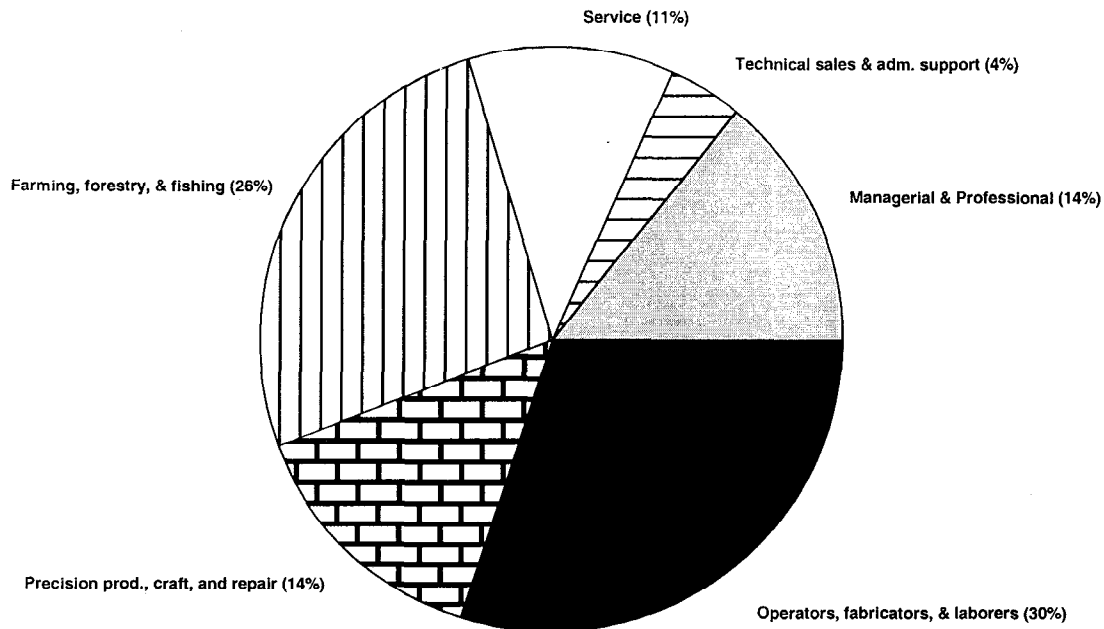
OCCUPATION

Operators, fabricators, and laborers, once again had the most occupational fatalities with 29 deaths in 1998. Handlers, equipment cleaners, helpers, and laborers accounted for over half with 16 fatalities, and 9 of those came from the construction field. Transportation and material moving occupations were involved in 10 occupational fatalities, with 8 of those 10 occurring to truck drivers. (Chart 8, Table 4)

Ranking second, the farming, forestry, and fishing occupations had 25 fatal occupational injuries in 1998, accounting for 26% of the total. Farmers, except horticultural, accounted for 15 of the 25 fatal injuries. Other agricultural and related occupations experienced the remaining 10, with 8 of the 10 occurring to farm workers. (Chart 8, Table 4)

Precision production, craft, and repair occupations tied with managerial and professional specialties for third, both having 14 fatal occupational fatalities each in 1998. For precision production, craft, and repair mechanics and repairers accounted for 7 of the 14 work related deaths while construction trades accounted for 6 of their 14. The 14 occupational fatalities recorded in the managerial and professional specialties during 1998 was the highest ever fatality count for this occupation group in the state. The executive, administrative, and managerial field accounted for 12 of those deaths. (Chart 8, Table 4)

**Chart 8. Fatal Occupational Injuries by Occupation
Kansas, 1998**



Service occupations in Kansas experienced their worst year on record with 11 occupational fatalities in 1998, this after having their best year in 1997 with only 3 work related deaths. Service occupations, except for protective and household accounted for 8 of the 11 deaths, with 5 of those occurring in the cleaning and building service occupations. Protective service occupations accounted for 3 work related fatalities. (Chart 8, Table 4)

Technical, sales, and administrative support accounted for only 4 of the 98 work related fatalities in 1998, making it the safest year yet for this occupation in Kansas. Three of the 4 fatalities occurred to salespeople. (Chart 8, Table 4)

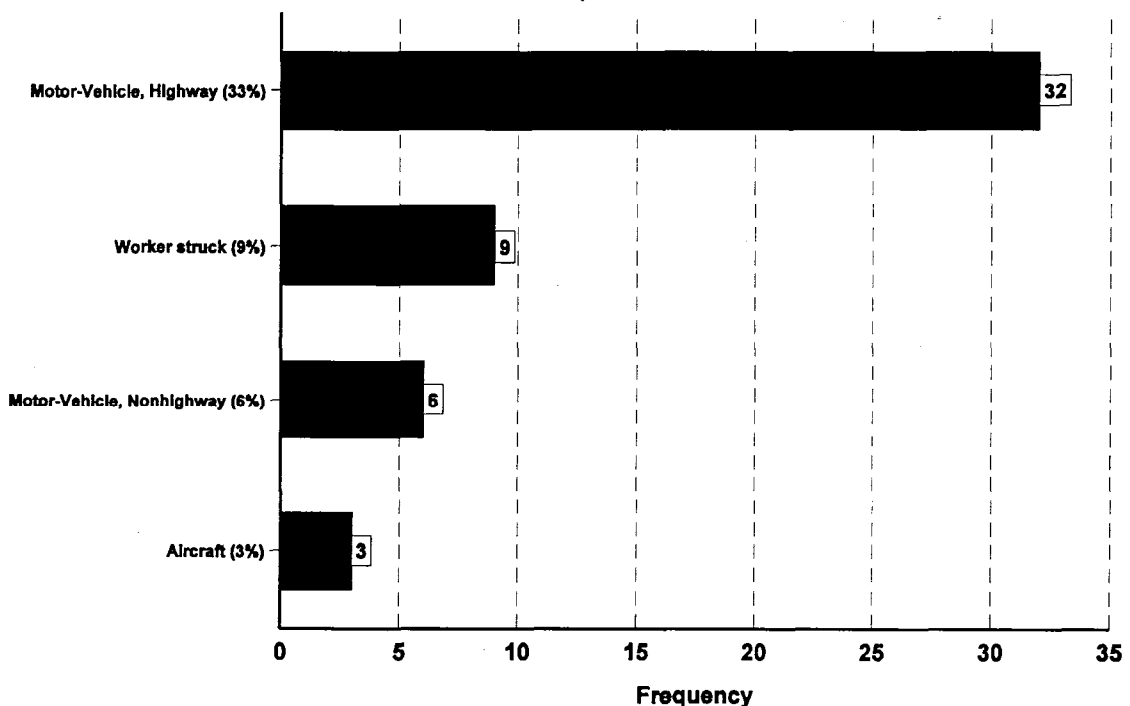
EVENT or EXPOSURE

The event claiming the most lives lost due to occupational injuries was once again transportation events, with 52 work related deaths. Highway fatalities claimed 32 worker's lives in 1998. Eighteen were from collisions between vehicles, 9 occurred from a vehicle striking a stationary object or equipment on the side of the road, and 5 were from noncollision incidents. (Chart 9, Chart 10, Table 7)

Non-highway incidents (farm, industrial premises) claimed the lives of 6 workers in 1998. Five of the 6 fatalities were noncollision accidents, 3 of those 5 occurred when a vehicle overturned. (Chart 9, Chart 10, Table 7)

There were also 3 aircraft fatalities and 9 incidents where a worker was struck by a vehicle or mobile equipment, 6 of those 9 occurred in a parking lot or non-road area. (Chart 9, Chart 10, Table 7)

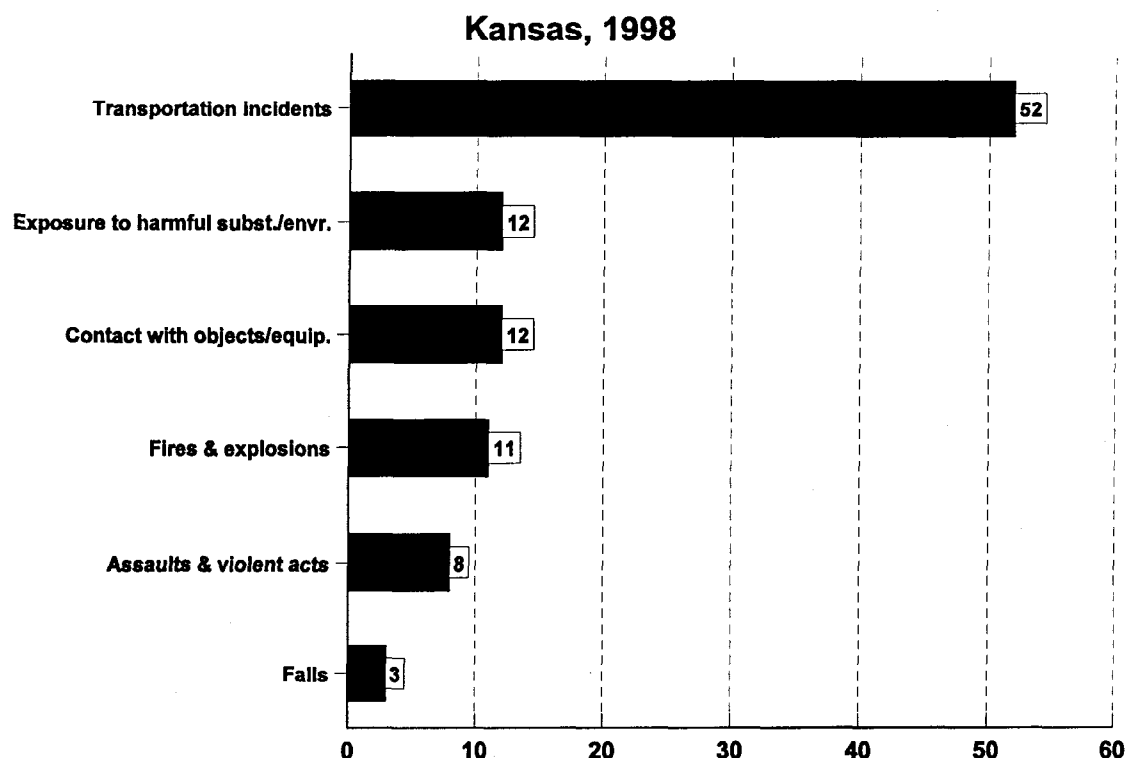
**Chart 9. Transportation Deaths by Type and Place
Kansas, 1998**



Twelve Kansas workers were fatally injured by having contact with objects and/or equipment in 1998. Being struck by an object killed half of the 12, and of those 3 were struck by a falling object. Four employees were fatally injured by being caught in or crushed by collapsing materials. (Chart 10, Table 7)

Being exposed to harmful substances or environments caused the demise of 12 Kansas workers, making 1998 an all time high for this event. Contact with electrical current caused 6 of the 12 occupational fatalities, 4 of those 6 involved contact with overhead power lines. Three other work related deaths involved being exposed to caustic, noxious, or allergenic substances, while the last 3 involved oxygen deficiency in some form. (Chart 10, Table 7)

Chart 10. Fatal Occupational Injuries by Event* or Exposure



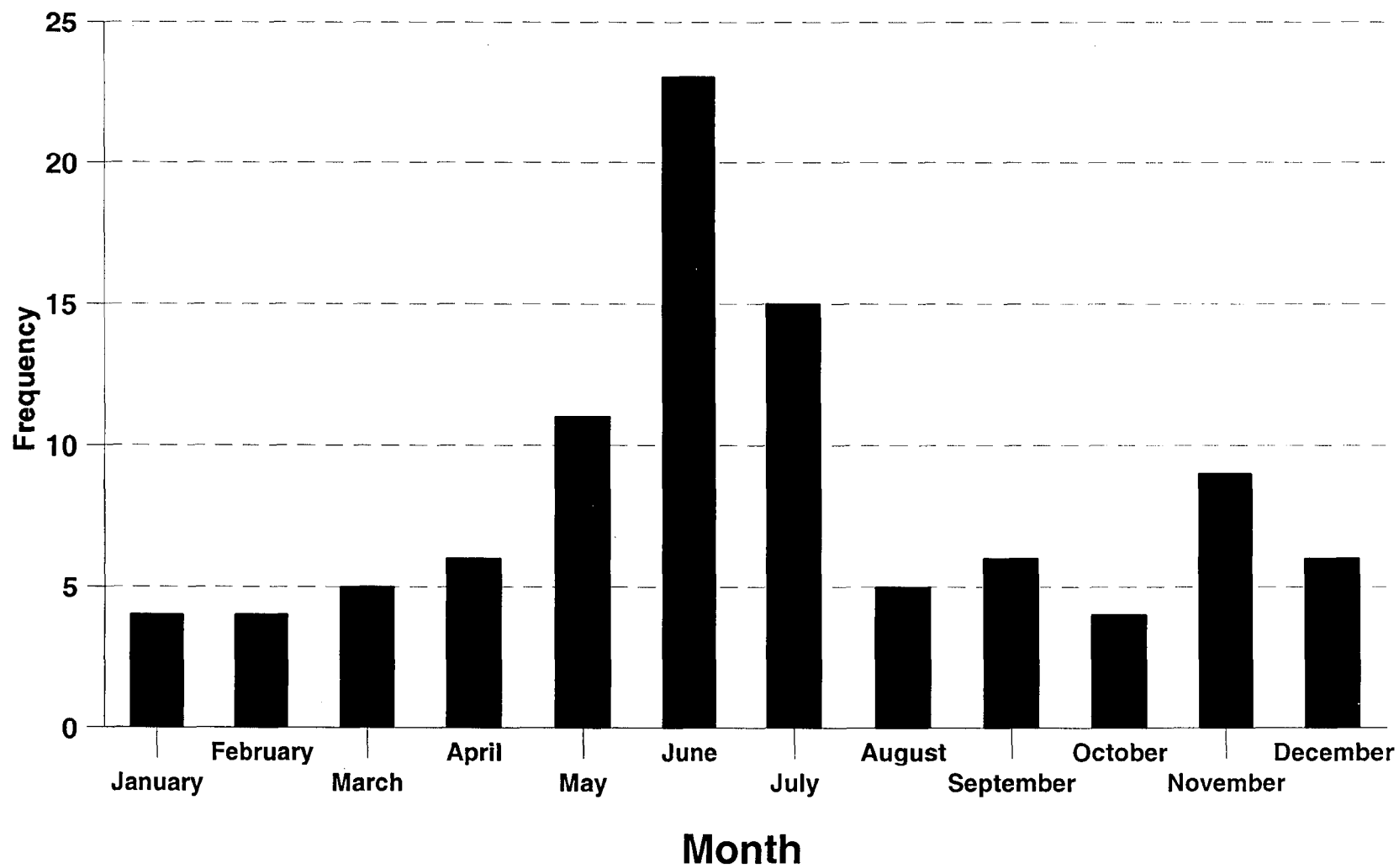
* Based on the 1992 BLS Occupational Injury and Illness Classification Manual.

In another all time high, fire and explosions caused 11 work related fatalities in 1998. Nine of the 11 fatal occupational injuries were caused by unintended or uncontrolled fires, and 7 of those were in a residence, building, or other structure. (Chart 10, Table 7)

Assaults and violent acts claimed 8 worker's lives in 1998 with 5 homicides and 3 self-inflicted injuries. (Chart 10, Table 7)

Falls were at a record low with only 3 work related deaths in 1998. All falls were falls to a lower level. (Chart 10, Table 7)

Chart 11. Fatal Occupational Injuries by Month of Injury
Kansas, 1998



**Chart 12. Fatal Occupational Injuries by Day of the Week
Kansas, 1998**

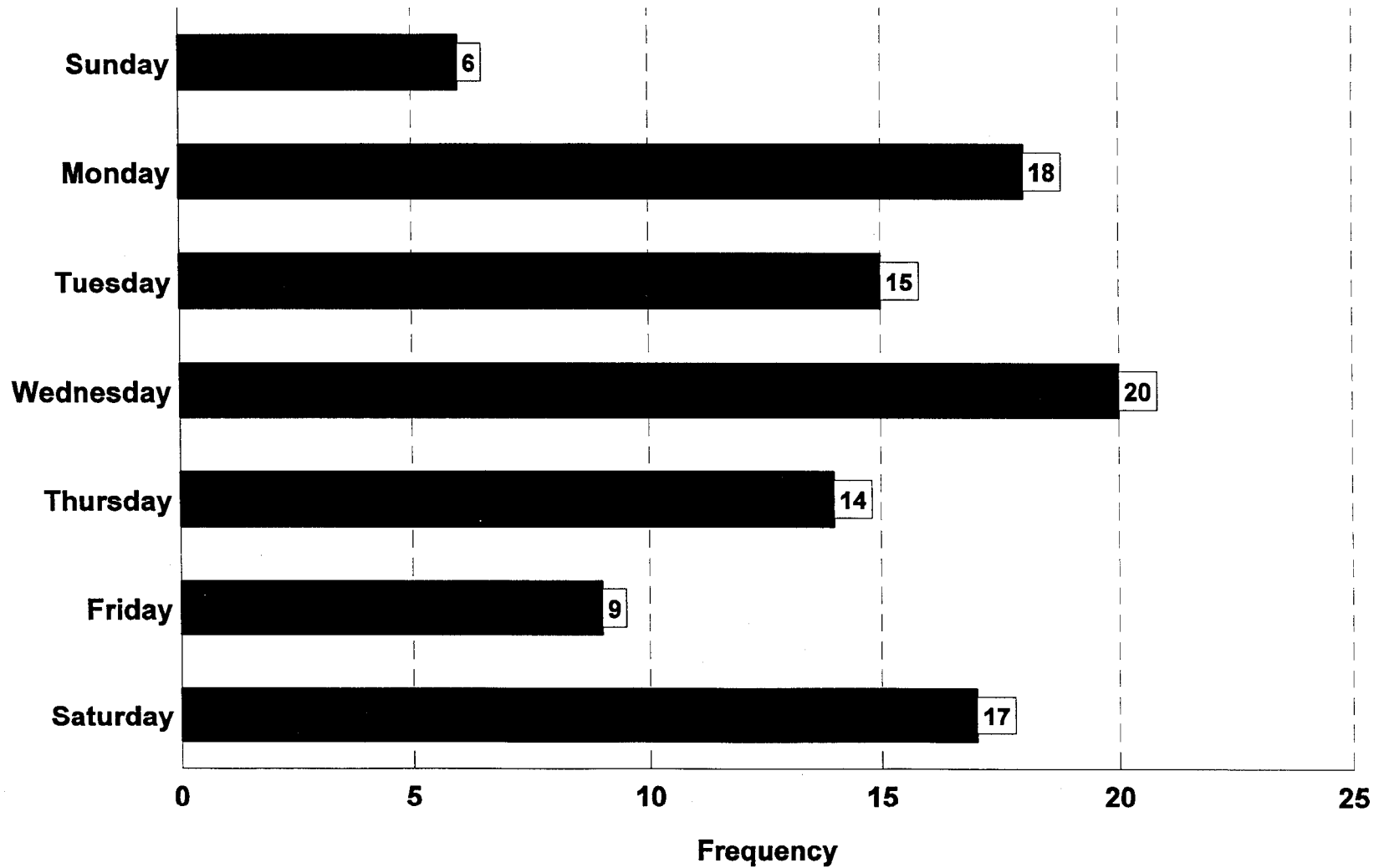
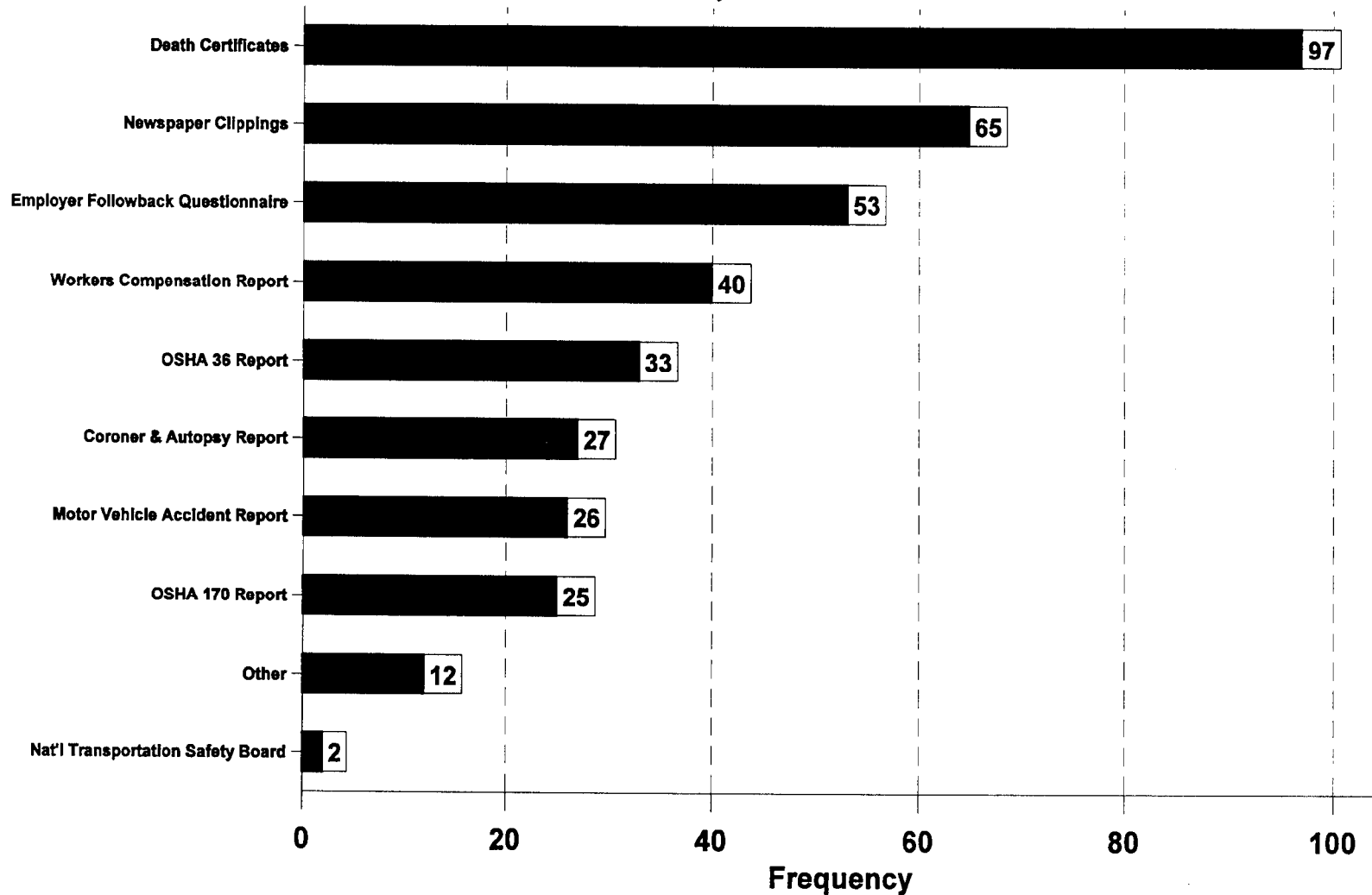


Chart 13. Number of Source Documents by Type
Kansas, 1998



Average number of source documents was 3.877 confirming sources per case.

SECTION TWO

TABLES

**Table 1. Fatal Occupational Injuries by Selected Characteristics
Kansas, 1998**

Worker Characteristics	Fatalities	
	Number	Percent
Total	98	100
Employee Status		
Wage and salary workers*	73	74
Self-employed**	25	26
Sex		
Men	94	96
Women	4	4
Age		
Under 20 years	6	6
20 to 24 years	10	10
25 to 34 years	22	22
35 to 44 years	17	17
45 to 54 years	16	16
55 to 64 years	16	16
65 years and over	11	11
Race		
White	91	93
Other	7	7
Hispanic origin		
Hispanic***	15	15

*May include volunteers and other workers receiving compensation.

**Includes paid and unpaid family workers, and may include owners of incorporated businesses, or members of partnerships.

***Persons identified as Hispanic may be of any race.

NOTE: Totals for major categories may include subcategories not shown separately. Percentages may not add to totals because of rounding.

SOURCE: Center for Health and Environmental Statistics, Kansas Department of Health and Environment, in cooperation with the Bureau of Labor Statistics, U.S. Department of Labor.

**Table 2. Fatal Occupational Injuries by Industry
Kansas, 1991 - 1998**

Industry*	1991	1992	1993	1994	1995	1996	1997	1998
Total	86	82	99	106	95	85	93	98
Private Industry	80	73	86	93	78	76	85	90
Agriculture, forestry, and fishing	23	23	36	23	17	18	22	23
Mining	7	3	8	6	6	-	7	3
Construction	15	8	10	16	20	19	13	18
Manufacturing	8	12	3	7	9	7	9	6
Transportation & public utilities	13	11	14	13	9	11	17	9
Wholesale trade	3	3	-	5	3	7	4	7
Retail trade	6	5	5	15	5	4	3	7
Finance, insurance, & real est.	-	-	-	-	-	-	-	3
Services	5	7	6	7	8	10	9	12
Government**	6	9	13	13	17	9	8	8

* Standard Industrial Classification Manual, 1987 Edition.

** Includes fatalities to workers employed by governmental organizations regardless of industry.

NOTE: A (-) indicates no data or data does not meet publication criteria.

NOTE: Totals for major categories may include subcategories not shown separately.

Percentages may not add up to totals because of rounding.

SOURCE: Center for Health and Environmental Statistics, Kansas Department of Health and Environment, in cooperation with the Bureau of Labor Statistics, U.S. Department of Labor.

**Table 3. Fatal Occupational Injuries by Industry
Kansas, 1998**

Industry*	Fatalities	
	Number	Percent
Total	98	100
Private Industry	90	92
Agriculture, forestry, and fishing	23	23
Agriculture production - crops	19	19
General farms, primarily crop	19	19
Agriculture production - livestock	4	4
Mining	3	3
Oil and gas extraction	3	3
Oil and gas field services	3	3
Construction	18	18
Heavy construction, except building	6	6
Heavy construction, except highway	6	6
Water, sewer, and utility lines	4	4
Special trades contractors	11	11
Roofing, siding, and sheet metal work	3	3
Miscellaneous special trade contractors	3	3
Manufacturing	6	6
Transportation and public utilities	9	9
Trucking and warehousing	6	6
Trucking and courier services, except air	6	6
Local trucking, without storage	4	4
Wholesale trade	7	7
Wholesale trade - nondurable goods	5	5
Farm-product raw materials	5	5
Retail trade	7	7
Eating and drinking places	4	4
Finance, insurance, and real estate	3	3
Services	12	12
Business services	5	5
Personnel supply services	4	4
Help supply services	4	4
Government**	8	8

*Standard Industrial Classification Manual, 1987.

**Includes fatalities to workers employed by governmental organizations regardless of industry.

NOTE: Totals for major categories may include subcategories not shown separately.

Percentages may not add to totals because of rounding.

SOURCE: Center for Health and Environmental Statistics, Kansas Department of Health and Environment, in cooperation with the Bureau of Labor Statistics, U.S. Department of Labor.

**Table 4. Fatal Occupational Injuries by Occupation
Kansas, 1998**

Occupation*	Fatalities	
	Number	Percent
Total	98	100
Managerial and professional specialty	14	14
Executive, administrative, and managerial	12	12
Managers, food serving and lodging establishments.	3	3
Managers and administrators, n.e.c.	6	6
Technical, sales, and administrative support	4	4
Sales occupations	3	3
Service occupations	11	11
Protective service occupations	3	3
Service occupations, except protective and household	8	8
Cleaning and building service occupations	5	5
Janitors and cleaners	5	5
Farming, forestry, and fishing	25	26
Farming operators and managers	15	15
Farmers, except horticultural	15	15
Other agricultural and related occupations	10	10
Farm occupations, except managerial	8	8
Farm workers	8	8
Precision production, craft, and repair	14	14
Mechanics and repairers	7	7
Mechanics and repairers, except supervisors	7	7
Construction trades	6	6
Construction trades, except supervisors	6	6
Operators, fabricators, and laborers	29	30
Machine operators, assemblers, and inspectors	3	3
Machine operators, assorted materials	3	3
Transportation and material moving occupations	10	10
Motor vehicle operators	8	8
Truck drivers	8	8
Handlers, equipment cleaners, helpers, and laborers	16	16
Construction laborers	9	9
Laborers, except construction	5	5

*Based on the 1990 Occupational Classification System developed by the Bureau of the Census.

NOTE: Totals for major categories may include subcategories not shown separately.

Percentages may not add to totals because of rounding.

SOURCE: Center for Health and Environmental Statistics, Kansas Department of Health and Environment, in cooperation with the Bureau of Labor Statistics, U.S. Department of Labor.

**Table 5. Fatal Occupational Injuries by Nature of Injury
Kansas, 1998**

Nature of Injury	Fatalities	
	Number	Percent
Total	98	100
Traumatic injuries and disorders	98	100
Traumatic injuries to bones, nerves, spinal cord	-	-
Multiple traumatic injuries to bones, nerves, spinal cord	-	-
Open wounds	6	6
Gunshot wounds	3	3
Punctures, except bites	3	3
Burns	3	3
Heat burns, scalds	3	3
Intracranial injuries	19	20
Cerebral hemorrhages	-	-
Multiple intracranial injuries	18	18
Multiple traumatic injuries and disorders	26	27
Burns and other injuries	6	6
Intracranial injuries and injuries to internal organs	20	20
Other traumatic injuries and disorders	41	42
Asphyxiations/strangulations, suffocations	5	5
Drownings	-	-
Electrocutions, electric shocks	6	6
Internal injuries to organs and blood vessels of the trunk	23	24
Other poisonings and toxic effects	4	4
Non specified injuries and disorders	-	-

NOTE: Totals for major categories may include subcategories not shown separately. Dashes indicate no data or data did not meet publication criteria. Percentages may not add to totals due to rounding.

SOURCE: Center for Health & Environmental Statistics, Kansas Department of Health and Environment in cooperation with the Bureau of Labor Statistics.

**Table 6. Fatal Occupational Injuries by Part of Body
Kansas, 1998**

Part of Body	Fatalities	
	Number	Percent
Total	98	100
Head	20	20
Cranial region, including skull	20	20
Brain	20	20
Neck, including throat	-	-
Multiple internal neck locations	-	-
Trunk	24	24
Chest, including ribs, internal organs	15	15
Chest, except internal location of diseases and disorders	5	5
Heart	-	-
Multiple internal chest locations	8	8
Abdomen	-	-
Abdomen, except internal location of diseases or disorders	-	-
Pelvic region	-	-
Pelvis	-	-
Multiple trunk locations	4	4
Body systems	16	16
Multiple body parts	36	37

NOTE: Totals for major categories may include subcategories not shown separately. Dashes indicate no data or data does not meet publication criteria. Percentages may not add to total because of rounding.

SOURCE: Center for Health & Environmental Statistics, Kansas Department of Health and Environment in cooperation with the Bureau of Labor Statistics.

**Table 7. Fatal Occupational Injuries by Event or Exposure
Kansas, 1998**

Event*or Exposure	Fatalities	
	Number	Percent
Total	98	100
Transportation incidents	52	53
Highway	32	33
Collision between vehicles, mobile equipment	18	18
Moving in the same direction	5	5
Moving in opposite directions, oncoming	9	9
Moving in intersection	3	3
Vehicle struck stationary object or equipment on the side of the road	9	9
Noncollision	5	5
Jack-knifed or overturned--no collision	4	4
Nonhighway (farm, industrial premises)	6	6
Noncollision accident	5	5
Overturned	3	3
Aircraft	3	3
Worker struck by vehicle, mobile equipment	9	9
Worker struck in parking lot or non-road area	6	6
Assaults and violent acts	8	8
Homicides	5	5
Self-inflicted injury	3	3
Contact with objects and equipment	12	12
Struck by object	6	6
Struck by falling object	3	3
Caught in or crushed in collapsing materials	4	4
Falls	3	3
Fall to lower level	3	3
Exposure to harmful substances or environments	12	12
Contact with electric current	6	6
Contact with overhead power lines	4	4
Exposure to caustic, noxious, or allergenic substances	3	3
Inhalation of substance	3	3
Inhalation in an enclosed, restricted, or confined space**	3	3
Oxygen deficiency	3	3
Fires and explosions	11	11
Fires- - unintended or uncontrolled	9	9
Fire in residence, building, or other structure	7	7

*Based on the 1992 BLS Occupational Injury and Illness Classification Structures.

**Includes fatalities that are not considered to be "permit required" confined spaces as defined by the Occupational Safety and Health administration in its regulation of these structures.

NOTE: Totals for major categories may include subcategories not shown separately. Percentages may not add to totals because of rounding.

SOURCE: Center for Health and Environmental Statistics, Kansas Department of Health and Environment, in cooperation with the Bureau of Labor Statistics, U.S. Department of Labor.

**Table 8. Fatal Occupational Injuries by Source of Injury
Kansas, 1998**

Source of Injury	Fatalities	
	Number	Percent
Total	98	100
Chemicals and chemical products	4	4
Halogens and halogen compounds	-	-
Chlorine and chlorine compounds	-	-
Other chemicals	3	3
Oxygen and oxygen compounds	-	-
Sulfur and sulfur compounds	-	-
Containers	4	4
Containers - - non pressurized	4	4
Barrels, kegs, drums	-	-
Bottles, jugs, flasks	-	-
Tanks, bins, vats	-	-
Furniture and fixtures	-	-
Other fixtures	-	-
Lighting equipment	-	-
Machinery	11	11
Agricultural and garden machinery	4	4
Harvesting and threshing machinery	-	-
Other agricultural and gardening machinery	-	-
Construction, logging, and mining machinery	5	5
Excavating machinery	3	3
Mining and drilling machinery	-	-
Road grading and surfacing machinery	-	-
Heating, cooling, and cleaning machinery and appliances	-	-
Cooling and humidifying machinery and appliances	-	-
Material handling machinery	-	-
Cranes	-	-

**Table 8. Fatal Occupational Injuries by Source of Injury, continued
Kansas, 1998**

Source of injury	Fatalities	
	Number	Percent
Parts and materials	4	4
Building materials - - solid elements	-	-
Structural metal materials	-	-
Metal materials - - non-structural	-	-
Vehicle and mobile equipment parts	-	-
Tires, inner tubes, wheels	-	-
Persons, plants, animals, and minerals	5	5
Animals and animal products	-	-
Animal waste products, including manure	-	-
Food products - - fresh or processed	3	3
Bakery products, candy, confections, and snack foods	-	-
Grains, grain mill products	-	-
Structures and surfaces	6	6
Floors, walkways, and ground surfaces	4	4
Floors	-	-
Sidewalks, paths, and outdoor walkways	-	-
Street, road	-	-
Surfaces below ground level, n.e.c.	-	-
Other structural elements	-	-
Gates	-	-
Structures	-	-
Towers, poles	-	-
Tools, instruments, and equipment	4	4
Hand tools - - non powered	-	-
Cutting hand tools - - non powered	-	-
Ladders	-	-
Ladders - - movable	-	-

**Table 8. Fatal Occupational Injuries by Source of Injury, continued
Kansas, 1998**

Source of injury	Fatalities	
	Number	Percent
Vehicles	46	47
Air vehicle	-	-
Highway vehicle, motorized	36	37
Automobile	8	8
Motorcycle, moped	-	-
Truck	24	25
Van -- passenger or light delivery	3	3
Off-road vehicle, nonindustrial	-	-
All terrain vehicle (ATV)	-	-
Plant and industrial powered vehicles	7	7
Forklift	-	-
Powered industrial carrier, except forklifts	-	-
Tractor	5	5
Rail vehicle	-	-
Amusement park rail vehicle	-	-
Other sources	13	13
Ammunition	3	3
Bullets	-	-
Pellets	-	-
Atmospheric and environmental conditions	9	9
Fire, flame, smoke	9	9
Steam, vapors. Liquids, n.e.c.	-	-
Liquids	-	-

NOTE: Totals for major categories may include subcategories not shown separately. Dashes indicate no data or data does not meet publication criteria. Percentages may not add up to totals due to rounding.

SOURCE: Center for Health & Environmental Statistics, Kansas Department of Health and Environment in cooperation with the Bureau of Labor Statistics

SECTION THREE

APPENDIX

SCOPE OF CFOI DATA

The CFOI program includes the private sector, public sector, military, self-employed, and certain volunteers. To be included, an incident that resulted in death must have occurred in the reference state (in this case, Kansas) during the reference year (in this case, 1998), and must be work-related. If the incident occurred in a neighboring state but the death occurred in Kansas it is the neighboring state's responsibility to publish that occurrence. In the CFOI program a fatality is considered work-related only if the deceased was working for pay or other compensation at the time of the incident. Additionally, the deceased must be on the employer's premises, or, if at a different site, engaged in a work activity or present there as a condition of employment. Though the focus is primarily on injury-related deaths, illnesses that are determined to be work-related or that occur at work, such as heart attacks, are also considered to be within the scope of the program therefore information pertaining to fatal illnesses that are recognized to be work related, or which occur at work, are also gathered by CFOI but not published in this publication. CFOI criteria are generally broader than the criteria used by Federal and State agencies administering specific laws and regulations.

COLLECTION METHODS

The CFOI program produces a single, reliable census of workplace fatalities. Currently, annual estimates of the national work related fatalities range between 3,000 and 11,000 deaths per year. Reasons for this wide range of estimates can be explained by difference in statistical methods. In most cases the estimate is based on a single source document, such as the worker's compensation reports which by definition exclude self-employed, government employees, and other specified sectors of the labor force.

To insure that fatalities are work related, cases are researched from different sources until a work relationship is either determined or rejected. Two or more independent source documents or a source and a follow-up questionnaire must document each case. Organizations providing source documents for the CFOI program and the documents they provide include: Kansas Department of Health and Environment, Kansas death certificates; Kansas Department of Human Resources, Division of Worker's Compensation, fatal workers compensation reports; Occupational Safety and Health Administration, OSH-36 and OSH-170 reports; county coroners in Kansas, autopsy reports, coroners reports, and toxicology reports; clipping service, newspaper clippings; and Kansas law enforcement agencies, police reports. Cases identified as in-scope are coded in detail, providing information on approximately thirty data elements collected, including information about the worker, the fatal incident, the machinery or equipment involved and the circumstances surrounding the accident.

CLASSIFICATION SYSTEMS

The CFOI program uses the following classification systems to code/classify data elements collected.

- (1) The Occupational Injury and Illness Structures, to classify the nature of the injury, part of body affected, event or exposure, source of injury, and secondary source of injury.
- (2) The 1987 Standard Industrial Classification Manual, to classify the industry of the employer.
- (3) The 1990 Bureau of the Census Alphabetical Index of Industries and Occupations, to classify the occupation of the decedent.
- (4) The Federal Information Processing Standards(FIPS) codes, to classify geographic areas.